

# WEST Search History

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DATE: Friday, November 26, 2004

Hide?	Set Name	Query	Hit Count
		<i>DB=EPAB; PLUR=NO; OP=ADJ</i>	
<input type="checkbox"/>	L2	WO-2004003599-A2.did.	1
		<i>DB=USPT,EPAB,JPAB,DWPI,TDBD; PLUR=NO; OP=ADJ</i>	
<input type="checkbox"/>	L1	US-20040058091-\$.did.	1

END OF SEARCH HISTORY

AN 2004:252014 CAPLUS  
DN 140:294906  
ED Entered STN: 26 Mar 2004  
TI Anisotropic films based on 1,8-naphthoylene-1',2'-benzimidazole sulfonates  
and lyotropic liquid crystal systems and methods for making  
IN Dutova, Tatyana Ya.; Sidorenko, Elena N.  
PA Russia  
SO U.S. Pat. Appl. Publ., 17 pp.  
CODEN: USXXCO  
DT Patent  
LA English  
IC ICM C09K019-54  
ICS C09K019-52; C09K019-34; C09K019-32  
NCL 428001100; 252299010; 252299500; 252299620; 252299610  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 75  
FAN.CNT 1

*Chirgoff*

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004058091	A1	20040325	US 2003-601238	20030620
	WO 2004003599	A2	20040108	WO 2003-US20260	20030625
	WO 2004003599	A3	20040226		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
PRAI	RU 2002-117253	A	20020628		
	US 2003-601238	A	20030620		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004058091	ICM	C09K019-54
	ICS	C09K019-52; C09K019-34; C09K019-32
	NCL	428001100; 252299010; 252299500; 252299620; 252299610

OS MARPAT 140:294906  
AB Optically anisotropic films based on sulfoderivatives of 1,8-naphthoylene-1',2'-benzimidazole are disclosed. These compds. form stable lyotropic liquid crystal systems that exhibit excellent optical properties with films that are significantly thinner than the current state of the art. The lyotropic liquid crystal systems may be deposited on substrates for use in a wide variety of com. applications.  
ST anisotropic film naphthoylene benzimidazole sulfonates lyotropic liq crystal  
IT Liquid crystal displays  
Optical films  
(anisotropic films based on 1,8-naphthoylene-1',2'-benzimidazole sulfonates and lyotropic liquid crystal systems)  
IT Liquid crystals  
(lyotropic; anisotropic films based on 1,8-naphthoylene-1',2'-benzimidazole sulfonates and lyotropic liquid crystal systems)  
IT 501928-37-6P 521307-84-6P 675819-17-7P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(anisotropic films based on 1,8-naphthoylene-1',2'-benzimidazole sulfonates and lyotropic liquid crystal systems)  
IT 95-54-5, 1,2-Benzenediamine, reactions 23749-58-8, 1,8-Naphthoylene-1',2'-benzimidazole 69409-07-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(anisotropic films based on 1,8-naphthoylene-1',2'-benzimidazole  
sulfonates and lyotropic liquid crystal systems)

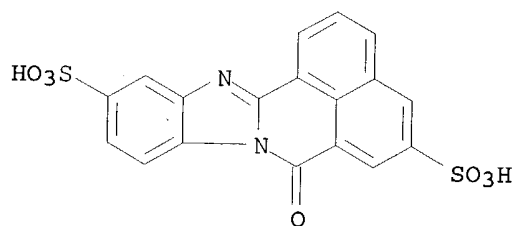
IT 501928-37-6P 521307-84-6P 675819-17-7P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)

(anisotropic films based on 1,8-naphthoylene-1',2'-benzimidazole  
sulfonates and lyotropic liquid crystal systems)

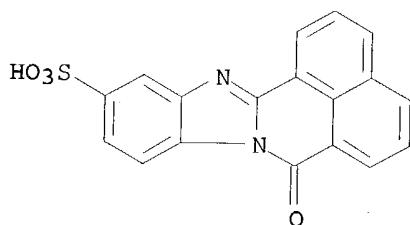
RN 501928-37-6 CAPLUS

CN 7H-Benzimidazo[2,1-a]benz[de]isoquinoline-5,11-disulfonic acid, 7-oxo-  
(9CI) (CA INDEX NAME)



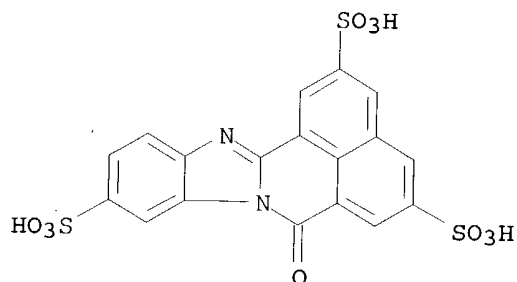
RN 521307-84-6 CAPLUS

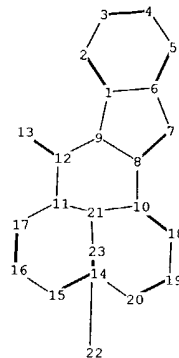
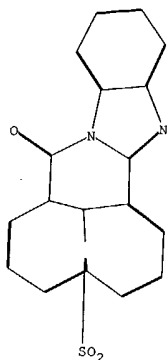
CN 7H-Benzimidazo[2,1-a]benz[de]isoquinoline-11-sulfonic acid, 7-oxo- (9CI)  
(CA INDEX NAME)



RN 675819-17-7 CAPLUS

CN 7H-Benzimidazo[2,1-a]benz[de]isoquinoline-2,5,10-trisulfonic acid, 7-oxo-  
(9CI) (CA INDEX NAME)



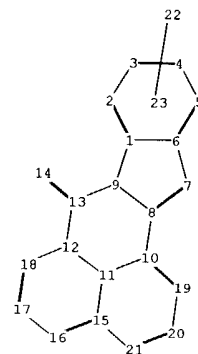
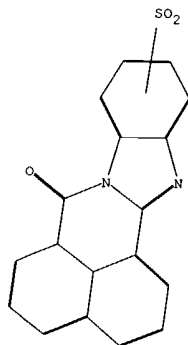


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chain nodes :
  13  22
ring nodes :
  1  2  3  4  5  6  7  8  9  10  11  12  14  15  16  17  18  19  20  21
chain bonds :
  12-13
ring bonds :
  1-2  1-6  1-9  2-3  3-4  4-5  5-6  6-7  7-8  8-9  8-10  9-12  10-18  10-21
  11-17  11-12  11-21  14-20  14-15  14-21  15-16  16-17  18-19  19-20
exact/norm bonds :
  1-9  6-7  7-8  8-9  8-10  9-12  10-18  10-21  11-17  11-12  11-21  12-13
  14-20  14-15  14-21  15-16  16-17  18-19  19-20
normalized bonds :
  1-2  1-6  2-3  3-4  4-5  5-6
  
```

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Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom
10:Atom 11:Atom 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:Atom
18:Atom 19:Atom 20:Atom 21:Atom 22:CLASS 23:CLASS
  
```



chain nodes :

14 22

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 15 16 17 18 19 20 21

chain bonds :

13-14

ring bonds :

1-2 1-6 1-9 2-3 3-4 4-5 5-6 6-7 7-8 8-9 8-10 9-13 10-11 10-19  
11-12 11-15 12-13 12-18 15-16 15-21 16-17 17-18 19-20 20-21

exact/norm bonds :

1-9 6-7 7-8 8-9 8-10 9-13 10-11 10-19 11-12 11-15 12-13 12-18  
13-14 15-16 15-21 16-17 17-18 19-20 20-21

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom  
10:Atom 11:Atom 12:Atom 13:Atom 14:CLASS 15:Atom 16:Atom 17:Atom  
18:Atom 19:Atom 20:Atom 21:Atom 22:CLASS 23:CLASS